REMARKS

In accordance with the foregoing, the specification and claims 1 and 13 have been amended. Claim 12 has been cancelled. Claims 1-11 and 13-15 are pending and under consideration.

I. Amendment to the claims

Claim 1 has been amended. Specifically, the limitation of claim 12 has been introduced into claim 1. Claim 12 has been cancelled accordingly. Claim 13 has been amended to depend from claim 1.

II. Rejection of claims 1 through 15 under § 35 U.S.C. 103(a)

In her August 25, 2009 Office Action ("Office Action"), the Examiner maintains the rejection of claims 1-15 as being obvious over U.S. 7,220,795 ("Miyoshi et al.") further in view of U.S. 5,965,655 ("Mordecai et al.")

In the Submission With Request for Continued Examination of July 6, 2009, Applicants submitted the Mr. Miyoshi Declaration. The Mr. Miyoshi Declaration stressed the importance of using the block copolymer (C-1) having the number average molecular weight ("Mn") of 200,000 to 300,000. In response, the Office Action asserts that Applicants have failed to submit evidence sufficient to demonstrate the criticality of the Mn range of block copolymer (C-1).

Rebuttal of the Prima Facie Case – Unexpected Results

To overcome rejection of the claims, Applicants offer rebuttal evidence to the alleged *prima facie* case of obviousness argued in the Office Action. Applicants argue that the shaped resin article of amended claim 1 is nonobvious over the prior art because of unexpectedly improved properties or properties not present in the prior art.

"If a *prima facie* case of obviousness is established, the burden shifts to the applicant to come forward with arguments and/or evidence to rebut the *prima facie* case.... Rebuttal evidence and arguments can be presented in the specification...." MPEP 2145

"Rebuttal evidence may include evidence of 'secondary considerations,' such as... evidence that the claimed invention yields unexpectedly improved properties or properties not

present in the prior art. Rebuttal evidence may consist of a showing that the claimed compound possesses unexpected properties...." MPEP 2145.

As mentioned above, the limitations of claim 12 have instantly been incorporated into amended claim 1. Specifically, the shaped resin article of amended claim 1 contains wollastonite particles (E) having an average particle diameter of from 2 to 9 μm. Through the combined use of the block copolymer (C-1) having a specific Mn and the wollastonite particles (E) having a specific average particle diameter, the shaped resin article of claim 1 possesses completely unexpected properties and/or unexpectedly improved properties over the prior art.

As described at page 1, line 23 to page 2, line 8 of the specification of the present application, the shaped resin article of the present invention has the following advantages:

(1) the shaped resin article has an excellent matte surface,

(2) the shaped resin article has excellent coating adhesion strength, and

(3) a coating formed on the shaped resin article has excellent sharpness of an image reflected therein.

The present inventors have noted that the related art had been unable to produce a shaped article with both the image sharpness (3) and coating adhesion strength (2) advantages. Both advantages could not be attained because the two properties were thus far known to be incompatible with each other. Because appearance of the final product had been a priority of the related art, and because image sharpness (3) was a determining factor in the final product's appearance, shaped articles of the related art possessed image sharpness (3) at the cost of coating adhesion strength (2).

Accordingly, Applicants reason that the Miyoshi et al. and Mordecai et al. examples utilize only an SEBS of relatively low molecular weight below 200,000 (i.e. Mn lower limit of claim 1's block copolymer (C-1)) because of this tradeoff. A higher molecular weight may improve coating adhesion strength (2) but compromise image sharpness (3).

In contrast, Example 5 and Comparative Example 2, provided in Table 2' below (and reproduced from Table 2, page 94 of the Specification), shows that the present inventors have overcome this technical dilemma. Example 5 and Comparative Example 2 differ only in the Mn of the SEBS block copolymer. The SEBS block copolymer of Example 5 has an Mn of 246,000 (i.e., block copolymer (C-1) of the present invention), whereas the SEBS block copolymer used

in Comparative Example 2 has an Mn of 98,500. It is important to note that neither Example 5 nor Comparative Example 2 utilized wollastonite particles.

The shaped resin article of Comparative Example 2 exhibited a high image sharpness but a poor coating adhesion strength. In comparison, the shaped resin article of Example 5 had almost twice the coating adhesion strength value, and the image sharpness suffered only slightly. Comparative Example 2 especially shows that a low molecular weight SEBS produces excellent image sharpness, though the coating adhesion strength is poor.

Table 2'[1]

	Ex. 5	Comp. Ex. 2
Mn of SEBS	246,000	98,500
Coating adhesion strength	83	45
Sharpness of an image reflected in the coated surface	B[2]	A

[1]Only data relevant to the instant discussion has been reproduced in Table 2' from Table 2 of the Specification
[2]For an explanation of the B and A values see Specification page 87, line 23 through page 88, line 3

The present inventors have for the first time found that the tradeoff described above can be overcome by the use of block copolymer (C-1) having a specific high molecular weight, and the advantages of the present invention can be further enhanced by the combined use of block copolymer (C-1) and wollastonite particles (E) having a specific average particle diameter. More specifically, as can be seen from Table 2' above, the use of block copolymer (C-1) has greatly improved the coating adhesion strength without serious lowering of the image sharpness; however, it is also a fact that the image sharpness actually lowered even though not so seriously. The combined use of block copolymer (C-1) and wollastonite particles (E) has completely overcome this tradeoff so that the image sharpness and the coating adhesion strength are both greatly improved.

As evidence, Table 3 of the Specification (see page 97) is reproduced below. In Table 3, Examples 8 through 10 clearly demonstrate shaped resin articles having both image sharpness and coating adhesion strength that are very high. The shaped articles of Examples 8 through 10 utilize wollastonite particles (E) having a specific average particle diameter that is within the range of amended claim 1. All of the properties evaluated in Examples 8 to 10 are far superior to those in Comparative Example 3, which uses wollastonite particles having an average particle diameter outside the range recited in amended claim 1.

			Ex. 8	Ex. 9	Comp. Ex. 3	Ex. 10
Upstream inlet						
Feeder 1	PPE-1 (parts by weight)		38	38	38	38
Feeder 2	MAH (parts by weight)		0.3	0.3	0.3	0.3
Feeder 3	SEBS1 (parts by weight)		12	12		12
	SEBS2 (parts by weight)				12	
1st downstream inlet						
Feeder 4	PA66-a (parts by weight)		30	30	30	30
	PA6 (parts by weight)		20			
	PA66/6I (parts by weight)			20	20	20
2nd downstream inlet						
Feeder 5	Wollastonite 1 (parts by weight)	*14	20	20		15
	Wollastonite 2 (parts by weight)	*15				5
	Wollastonite 3 (parts by weight)	*16			20	
Polyamide area ratio		%	87	83	82	88
Coating adhesion strength (number of square coating sections left on the surface of a shaped resin article out of 100 square coating sections)		-	**100**	**100**	32	**100**
Sharpness of an image reflected in the coated surface		-	**A**	**A**	D	**A**
Matteness of the coated surface		-	III[1]	III	I	IV

*14) Wollastonite (average particle diameter: 5 μm, aspect ratio: 13)
*15) Wollastonite (average particle diameter 5 μm, aspect ratio: 3)
*16) Wollastonite (average particle diameter: 10 μm, aspect ratio: 13)
[1]For an explanation of the I-IV values see Specification page 85, lines 14-25

Thus, Table 3 above clearly shows that the combined use of the specific block copolymer (C-1) and the specific wollastonite particles (E) greatly improves both of the image sharpness and the coating adhesion strength.

In addition, it should be noted that the coating adhesion strength value of "100" in Examples 8 to 10 (using both block copolymer (C-1) and wollastonite particles (E)) is even greater than the coating adhesion strength "83" in Example 5. In Example 5, wollastonite particles (E) were not used. In Examples 8 to 10, the image sharpness is maintained at the same level "A" as in Comparative Example 2 (using the low molecular weight SEBS block copolymer) despite the high molecular weight of block copolymer (C-1). Thus, in the shaped resin article of the present invention, the image sharpness and the coating adhesion strength are balanced at a very high level. The improvement coating adhesion strength has not been achieved at the cost of image sharpness, and vice versa.

The Prima Facie Case Has Not Been Made

Alternatively, Applicants argue that a *prima facie* case of obviousness has not been made. The Office Action argues that Miyoshi et al. teaches the claimed number average molecular weight of from 200,000 to 300,000. The Office Action asserts that Miyoshi et al. teaches hydrogenated block copolymers "having a number molecular weight from 40,000 to 250,000...." See Office Action page 2.

Miyoshi et al. may discuss the use of block copolymers with a wide molecular weight range, but the Examples only use SEBS polymers having low molecular weights (150,000 at the highest). See Applicants' Submission With Request for Continued Examination of July 6, 2009. Further, while Miyoshi et al. may discuss the use of wollastonite, it does not specify the dimension thereof. And Mordecai et al. may discuss the use of wollastonite particles having an average particle diameter of "about 0.1 μm to about 10 μm" (col. 11, lines 19-23) and the use of block copolymers such as SEBS. But Mordecai et al. does not specify a molecular weight range and the Mordecai et al. Examples use only SEBS copolymers having low molecular weights (181,000 at the highest). Id.

Therefore, while Mordecai et al. may teach the use of wollastonite particles having an average particle diameter overlapping the range of amended claim 1, neither Miyoshi et al. nor Mordecai et al. has any description which motivates those skilled in the art to:

1. choose a block copolymer having such a high molecular weight as not used in the Examples of Miyoshi et al. and Mordecai et al; and
2. combine such a high molecular weight block copolymer with wollastonite particles having an average particle diameter within the range of amended claim 1.

Neither Miyoshi et al. nor Mordecai et al. have any teaching or suggestion that the combined use of a block copolymer (C-1) having said specific high molecular weight and wollastonite particles (E) having a specific average particle diameter is useful for overcoming the above-mentioned tradeoff so that the image sharpness and the coating adhesion strength can be balanced at a very high level. Thus, the excellent effects obtained by the combined use of block copolymer (C-1) and wollastonite particles (E) are completely unexpected from Miyoshi et al. and Mordecai et al.

Further, given the above discussion of the tradeoff between image sharpness and coating adhesion strength, neither Miyoshi et al. nor Mordecai et al. teach the Mn range of amended claim 1. It appears that both references avoided using higher molecular weight SEBS polymers falling within the range of amended claim 1 because the resulting shaped resin articles would have had unsatisfactory appearance. The average molecular weights used in the examples of Mordecai et al. and Miyoshi et al. were more likely the related art's actual (and enabled) upper limit, as opposed to the "most preferred range" taught by Miyoshi et al. Surely, if the unexpected results of the present invent invention had been known, Mordecai et al. would have included examples incorporating both wollastonite particles and a higher average molecular weight SEBS. Because neither reference actually teaches the claimed invention, claim 1 is unobvious over the prior art.

From the above, it is apparent that the shaped resin article of amended claim 1 is not obvious over Miyoshi et al. even in view of Mordecai et al.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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